



ZOOLOG

PUBLISHED QUARTERLY BY THE ZOOLOGICAL SOCIETY OF MANITOBA



Dr. H. E. Welch,
110 Thatcher Drive,
WINNIPEG 19, Man.

Our cover is not a reproduction of a

Zebra fur.

It simply shows that op-art, pop art,

all art may find its origin in the

boundless beauties of nature.

**The editor of
Zoolog will gladly
accept applications
for membership
to the Zoological
Society of Manitoba.**

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Contributing Membership

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ZOOLOG

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President's Message

— George Heffelfinger

There have been two major happenings within the Zoological Society over the past few weeks. The first of these is the completion of our annual membership drive, which has once again proved successful. We continue to have a relatively small membership but interest is growing each year. Our members are very definitely people with a sincere interest in the maintenance and development of the Assiniboine Park Zoo, and that is the way it should be. I would like to welcome new members to the Society and thank those who have renewed their membership for this year.

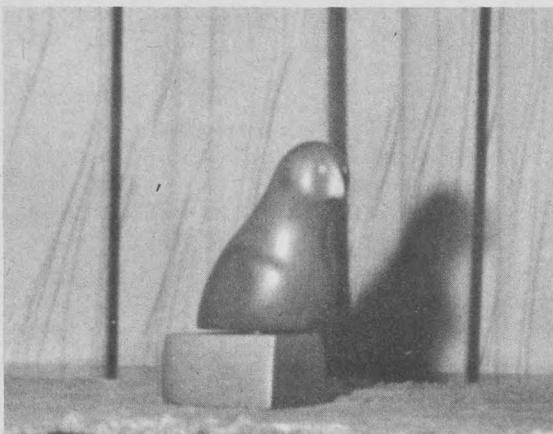
Elsewhere in this issue of Zoolog, you will find documented the very fine gift which the Society has received and has turned over to the Zoo, namely, a pair of Hartmann's Mountain Zebra. These zebras were given by Mrs. Peter Curry who has travelled extensively in Africa and has a very sincere feeling for the preservation of African animals. Mrs. Curry tells me that her gift was made for two reasons. In the first place, she is concerned that in the long run many species of African animals can only be preserved in zoos and strongly patrolled wild animal reserves in their native country. Secondly, she hopes her gift will provide leadership to others in the community who may be inclined to make donations of animals or animal accommodations to the Zoo.

And now, my most sincere wish to one and all for a happy Christmas Season and prosperity in our Centennial Year of 1967.

ALAS

A good friend of our Zoo, Mr. D. J. Wilson of St. James, has very generously offered some of the most spectacular exhibits from the animal world "down under" to our Assiniboine Park Zoo. His son, a civil engineer, is currently working for the Australian Government in the jungle of New Guinea. He could donate to our Zoo some most fascinating animals indigenous to that country, especially Cassowaries and the Red Tree Climbing Kangaroos. Alas, as we have no housing for these exotic creatures at our Zoo to-date, this enchanting offer had to be rejected.

Another fine offer of a donation to our Zoo had to meet the same fate for the same reason. Mrs. Donald G. Lemon, an ardent and experienced birder and member of the Natural History Society, wanted to establish a memorial to her own and her husband's outstanding experiences in birding, sponsoring the Zoo's acquisition of one of her four most favoured rare birds in Manitoba: a pair of Yellow-crowned Night Herons (*Nyctanassa violacea*), some Silky Flycatchers (*Phainopepla*), or Audubon's or Golden-winged Warblers. Here again, lack of suitable facilities, particularly of heated accommodations for the winter, left no choice but to turn the much appreciated offer down.



Soapstone

Rocks have played an important role in the culture of every nation. The limestone pyramids of Egypt and the alabaster statues of the ancient Greeks are two of the most outstanding examples. Our Canadian culture also has a prominent rock, soapstone, which is used by the Eskimos to carve their famous ornaments. Much has been written about the cultural and historical aspects of these unique carvings but little has been mentioned about the rock that makes these carvings possible.

Soapstone or Steatite is a metamorphic rock composed of at least 50% talc and 50% other magnesium carbonate minerals. The name itself indicates some of its physical properties. It has a greasy soaplike feel and is so soft it can be scratched by a fingernail. The extreme softness, unique feel, and distinctive greyish-green color make this rock easily identifiable for Eskimos and rock-hounds.

This rock is formed through a process known as low grade metamorphism. When solid masses of rock, high in magnesia, lime and iron contents, found below the earth's surface are subjected to low pressure and heat

from overlying rocks, their crystals are melted and recrystallize to form different minerals; and in turn different rocks. This process can also occur when molten masses of these basic rocks are intruded into fissures in the earth's crust, and the resultant cooling forms different minerals. By either of these methods, talc and the other magnesium carbonate minerals of soapstone are formed.

Soapstone is commonly found in the Canadian Shield. The largest deposit is located at Robertsonville, Ontario, and is mined on an industrial basis. Manitoba has no known large deposits and the Eskimo finds his supply of soapstone from small local outcrops.

Besides its cultural value, soapstone is also an industrial rock. Due to its infusibility and insolubility in acids, soapstone is used for linings in acid vats, acid resistant benchtops and electrical switchboards. It is also the main source of talc, which is used for talcum powder, crayons and French Chalk.

— Klaus Kyritz, B.Sc.

DEER THROUGH THE WINTER

Most Manitobans, especially those living in cities and towns, don't give much thought to wild deer during the months of November, December, January, February and March. "Out of sight, out of mind" is an apt saying as people shift their attention from summer playgrounds to curling and other inside activities. Deer that were seen along roads and beaches and behind cottages in July and August are rarely thought of during January and February. But deer do not migrate to Florida and have to contend with everything our winters throw their way.

With their short legs, deer have difficulty moving about when snow depths are greater than 24 inches. For awhile, the animals can survive on their stored energy but eventually, if conditions do not relent, they die of malnutrition.



Many people will remember the winter of 1955/56 as one of early and deep snow that persisted late into spring. Deer died that winter in wholesale numbers. Bucks, does and fawns perished, and in some districts few deer were alive when warm weather finally arrived. If all our winters were like that one, white-tailed deer would be an oddity in Manitoba.

Fortunately it is only the rare winter that causes large-scale die-offs in our deer herds. But what many people are less aware of is the fact our climate almost every winter is sufficiently severe to leave a mark on our deer herds without the damage being obvious to the human eye.

We know now from findings of research biologists in Manitoba and other northern areas that unborn and newly-born deer perish in varying amounts almost every winter and spring, even during some of those years when few or no deaths are noticed in the herd.

A relatively mild winter, with no more than moderate snow and temperature conditions, is generally not hard on deer providing adequate food supplies are available. A cold winter, such as we had during 1965/66, even without too much snow will adversely affect deer. And here I have in mind primarily the unborn young that were conceived during the previous October and November. Real low temperatures, especially if accompanied by winds, drain the energy reserves out of deer and even with fair food supplies a female's condition will gradually deteriorate until its unborn fawn (or fawns) is doomed. The mother may not die herself but her unborn young, or the weaker of her twin or triplet fetuses, may die and be resorbed into her system, may be stillborn or may die within 48 hours after birth because of weakness or because the mother has insufficient milk. These occurrences in Manitoba could explain why deer irruptions and overpopulations do not happen in some places even if hunting is minimal and food is underutilized.

Of course, every Manitoba winter is different. Some years we complain about the snow, others about the temperature. Deer, too, find winters different but as long as snow depths, crust conditions, temperatures, winds and duration of these conditions add up to severe stress we can expect our deer herds to suffer a setback of some degree. And as we have seen the setback is more likely to be among the unborn than among the living.

— Eugene F. Bossenmaier

Our Zoo Animal Collection (1)

Gunter Voss, Dr. rer. nat.
Zoo Director

On an evening in November, I had the privilege and pleasure of spending some hours with Dr. and Mrs. Richard Glover in Ottawa. They have asked me to pass their greetings on to all their friends in our Zoological Society.

We chatted of the Duke of Bedford's Red Deer and of Onagers at Moscow Zoo, of Oeming's Muskoxen and of a black Elk near Banff, and these zoological craft talks lasted well into the night. You should have seen Dr. Glover's delight when I told him of our recent acquisitions of English Red Deer (a trade originally proposed by Dr. Glover himself), Mongolian Saiga and European Bison. When Dr. Glover was President, the Zoological Society of Manitoba had recommended precisely these species, and many others, for acquisition.

Upon return to Winnipeg, I have again studied the publications, prepared by the "old faithfuls", the members of the Research and Liaison Committee of 1959:

Dr. A. Savage, Chairman,
Dr. R. Glover, President,
Mr. A. Hamilton, Secretary,
Mr. G. W. P. Heffelfinger,
Prof. G. C. Hodgson,
Mr. T. R. Hodgson, Superintendent,
Dr. R. J. Kirk,
Mr. G. W. Malaher,
Dr. J. A. McLeod,
Mr. J. K. Rankin,
Mr. J. Shelly,
Prof. R. K. Stewart-Hay,
Mr. R. W. Sutton,
and Mr. J. J. Thomas.

These pamphlets served as a guide to the Zoo planners of that time, the Winnipeg Board of Parks and Recreation. There is one booklet, entitled "Foreign Animals for the Win-

nipeg Zoo." It discusses "The Case for acquiring Foreign Animals" and "Animals likely to prove suitable to our Conditions." Stressing that "the present list is not necessarily complete," acquisition of the following forms of land mammals is recommended:

European Brown Bear,
Kodiak Bear,
Himalayan Black Bear;
Siberian Tiger,
Snow Leopard;
Himalayan Langur,
Japanese Macaque;
Two-humped Camel,
Llama,
European Red Deer,
Caucasian Red Deer,
Hangul,
Formosan Sika,
Pekin Sika,
Pere David's Deer,
Roe Deer,
Reeve's Muntjac,
Chiru,
five old-world species of wild goats and sheep; three new-world species of wild sheep;
European Bison,
Wild Boar,
Kiang, Kulan or Turkmenistan Onager.

The Committee went over this list with me at a meeting in 1959, and we added more species yet. A question mark behind the name indicates that the animal was considered but not unanimously favoured. These are the additions.

Lesser Panda ?;
Jaguar ?;
Chacma Baboon ??;
Vicuna,
Alpaca,
Chinese Water Deer,
Siberian Roe Deer,
Saiga,

Takin,
Goral,
Goitred Gazelle,
Blackbuck?,
Whitetailed Gnu?,
Eland??,
Nilgai??,
Addax?,
Mountain Nyala?,
Greater Koodoo?,
and Siberian Ibex.

This was seven years ago. Our neighbouring Zoo to the west-north-west, the Alberta Game Farm, has since acquired all but ten or so of the species proposed in our bulletin and in our special session of 1959, exhibiting them the year around with a minimum of shelter. Our Assiniboine Park Zoo has also increased its animal collection in line with our Zoological Society's recommendations, but not as rapidly as the Alberta Game Farm. Space does not permit to describe animal acquisitions at length in this issue of *Zoolog*. More detailed information will be presented in 1967. Instead, a few photographs shall suffice to-day to introduce some kinds of animals obtained since 1959.



Saiga

Saiga tatarica

The peculiar, inflated nose renders this animal easily distinguishable from all other antelopes. Our breeding pair, obtained from the Dallas Zoo, are the only Saiga to be seen alive in Canada. They are perfectly hardy in our climate.



Himalayan Black Bear

Selenarctos thibetanus

This Asiatic Black Bear, also known as the Moon Bear, ranges from parts of Persia to East Asia including Japan. There are various races of different size. Our specimens are brother and sister of a litter born at Como Park Zoo in St. Paul. An exchange of either the male or the female bear for an unrelated specimen of the same sex is desired.



North Vietnamese Macaque

Macaca speciosa melli

These animals are also known as North Vietnamese Bear Macaques or Bear Monkeys. Our original group was imported through Tierpark Berlin. They have done very well in Winnipeg. We acquired them in lieu of the Japanese Macaque. Our subspecies is also kept at Prague Zoo in Czechoslovakia and possibly at the Zoo of Hanoi and in Chinese collections.



'Tis the season to be jolly we are told, but one look outside the window fills us with doubt and we wonder why humans do not have the good sense to hibernate as bears do. For hibernating mammals and the only hibernating bird, (Nuttall's) Poor-Will, the matter is rather involuntary and complex.

Considered as primary cause for hibernation is an increase of free magnesium and bromine in the blood, and a decrease of ultraviolet rays in the daylight causing a diminishing build-up of vitamin D.

Common to all hibernators are lower body temperature, decreased heartbeat and breathing, lower blood-sugar content, and the cessation of the function of the alimentary canal and excretory organs. These physiological changes occur in animals who are perfectly able to maintain an even body temperature regardless of outside temperature in spring, summer and autumn.

Towards autumn and winter a notable increase of secretion of insulin takes place, causing the liver to tie up more bloodsugar in the form of glycogen, which, in turn, causes a general decrease of the animal's metabolism.

The thyroid slows down its function, which is normally a secretion of iodine-containing thyroxin. A lack of thyroxin produces in humans, among other things, a decrease in ap-

petite associated with an increase in fat accumulation. This may help the hibernators to survive on a limited amount of fat.

The thymus also slows down its processes of blood - and tissue-building. The fat metabolism of hibernators seems to be regulated through a hibernating gland which is expended over winter. This gland lies in the neck area and extracts of this gland lower the basic metabolism and body temperature, and also cancel the effect of the thyroid's thyroxin.

If the whole process of mammals' hibernation sounds like an inevitable and totally involuntary event which causes the animal to creep into the next best hole to lie up the winter, an article appearing in the October 1966 issue of the Reader's Digest, "The Day the Bears Go to Bed", by Jean George, gives us a different picture. This article relates of a team of scientists who eventually reached the conclusion that Grizzly Bears do not seek their final shelter for the winter until a storm with drifting snow converges on the forest and covers their footprints to their dens. What makes the Grizzlies wait for this storm, and what tells them that this storm is coming so that they may start on their various journeys to the sometimes far away dens is as yet unknown.

Another instance of voluntary behaviour of customary sleepers may be observed in some zoos, when on

L'Hiver

a Sunday afternoon all the bears seem to forget their physiological reasons and causes and come out to watch all the people go by.

A more cautious approach to definitions of causes for certain animal behaviour will be indicated when we consider that among Polar Bears, only pregnant females hole up for the winter and give birth during their torpid state of hibernation. Baby bears, Black, Grizzly and Polar Bears, depend on their mothers' staying in a warm place for they are completely naked at birth and keep warm in various body folds and long fur.

Many other animals have to contend with Canadian winters. Birds who may have difficulty finding food fly south, and only a few remain to feed on stored treasures, or treasures stored under bark and in all sorts of nooks and crannies where these treasures, mainly insect larvae and pupae, hole up in the hope of perpetuating the species in spring. Others, such as deer, wolves, moles et al, are able to find food but just have to try harder.

But what about amphibians and reptiles? They have no fat to speak of and no food to eat. They are also dependent on outside temperature. When this falls below a certain amount, the animals crawl into recesses provided by branches, rocks or earth and spend the winter practically lifeless, though not dead.

Snails hide in protected places and also close their shells with a protective membrane.

As long as water stays liquid, plant and microscopic animal life flourish to at least some extent, depending on the water's temperature, and fish have no problem.

One of the blessings of winter, for sweet blooded humans at any rate, is the total absence of insects. Many perish, some survive similar to reptiles and amphibians; but most leave eggs, larvae or pupae to brave the chilling frosts and searching birds. Evidently, enough of them survive to ensure an abundant insect life during the hot summer months.

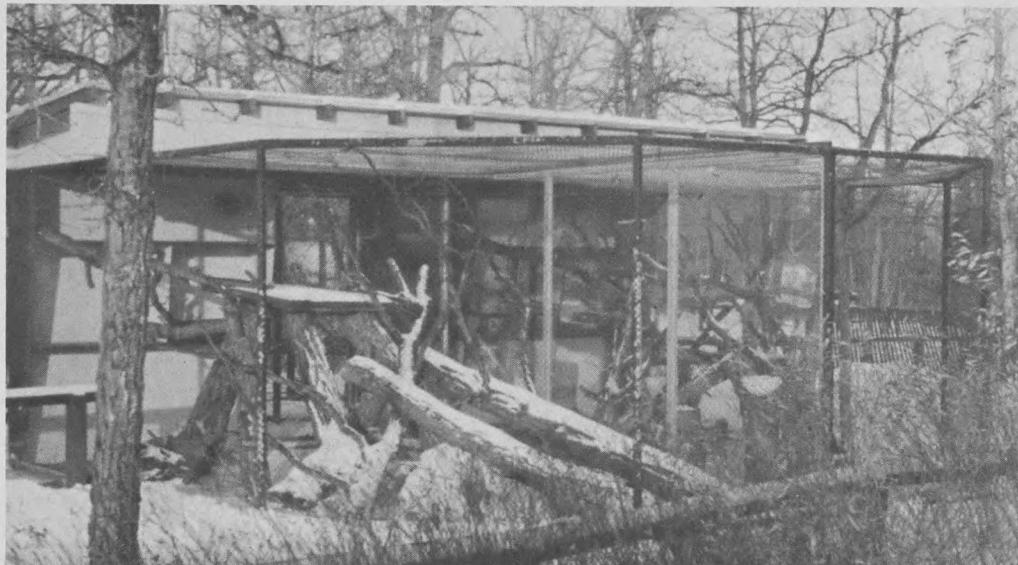
The origin of the word hibernation ought to be well known in a nation of attempted bilingualism.

In lands closer to the earth's equator, a form of decreased and almost nonexistent activity also occurs during extreme dry and hot seasons.

Known as summer sleep or aestivation, it affects mainly reptiles, amphibians and some fish, especially some catfish and lung fishes. Most of these animals escape into moist or damp hiding places, some desert snails react similar to their northern counterparts and close their shell entrances; smaller, and one-celled animals may form a capsule in which they avoid total dehydration.

If the heat rises further yet, nerves lose their ability to relay information and orders, and at this maximum tolerance of the animal's system, a total cessation of all activity in or outside the body marks the true summersleep. Should the temperature still climb higher, the animals die of heat exposure due to the coagulation of proteins.

Here we have accumulated abstracts from the wealth of scientific information available. We cannot claim completeness nor lucidity. In fact, all serious scientists who have spent years, even lifetimes on the mysteries of hibernation and aestivation concede that results are inconclusive.



The Porcupine Cages

Planning for Change

When the Board of Parks and Recreation of the City of Winnipeg, at that time operating our Assiniboine Park Zoo which has since been taken over by Metro, granted funds for major improvements in 1960, two projects were begun. One was the swingy structure commonly known as the tiger cage and the other one a twin cage design usually referred to as "porcupine cages".

In a growing Zoo, nothing is as assured as change. The so-called tiger cage is actually designed for a group of monkeys, fairly big and hardy monkeys without a visible tail, Barbary Apes. Apes they are not. However they make a good show, especially since they have become of historical-superstitious significance as they are that famous kind of monkey living on the rock of Gibraltar. Yet, when our cage was ready for occupation Gibraltar Monkeys or Barbary Apes were in short supply, whereas a Siberian Tiger, gift of Winnipeg citizens, had to find a suitable temporary home.

This cage was it. A trio of Siberian Tigers have since established themselves there. One pair even bred. A litter of three cubs, the first Siberian Tigers ever to be born in Canada, is presently being raised.

Yet the cage remains to be designed for Barbary Apes. If all goes well, they are to be the final occupants. However, our Tigers must have their final home before they can evacuate the Barbary Ape cage. The Zoological Society has reason to believe that the accommodations for our Siberian Tigers, which were to be constructed in the immediate vicinity of the newly erected Snow Leopard cage, should be high on the priority list of Zoo improvements.

The twin cage structure, usually referred to as "Porcupine cages", has a similarly exciting history.

It is the first cage in a carefully planned landscaped setting, also the originating point of our wooden pedestrian railings, which blend so much better in park scenery than the

battleship-like metal barriers often seen in U.S. Zoos. Another beautiful feature around our porcupine cages is the flagstone walk. The animals have done well in these cages: several native Porcupines have been born therein. But the Zoo designers' confidence in the good behaviour of the visiting public has been disappointed to some extent, as proven by the bags kicked into the low portion of the chain-link fence. There will be no more immediate confrontation of small mammals and boys' boots in future Zoo structures.

The twin cages are to be our final home for native Porcupines, the eastern one for the eastern, and the western one for the western race. But other occupants have moved in for an interim period. They are smaller, more slender and by far more agile, Red Pandas in one and Fisher in the other cage. The Red or Lesser Pandas will have a beautiful new home range built for them, hopefully in 1967. The Fisher have become so popular that the Zoo does not want to abandon this very fine native species either.

And since Dr. Voss has been captivated by the charm and beauty of *Martes flavigula*, in Prague in May, and in Washington in October of this year, this counterpart of the Fisher is bound to appear on the Winnipeg scene sooner or later, too.

The Fisher, (*Martes pennanti*) of North America, and the Yellow-throated Marten, (*Martes flavigula*) of Asia, are representatives of the same

genus, *Martes*. This includes Martens, Fisher and the Sable, of the family Mustelidae, the weasel - like ones. Forested northern areas are their home, where they climb and leap elegantly. They are graceful animals with valuable furs.

The coat of a Fisher is largely uniform in colour. It is predominantly brownish black. The animal appears to be somewhat heavy, fox-like, and measures near three feet in length. The male specimen in our Zoo has come from the southern Lake Winnipeg area, the female originated from northern Minnesota.

Yellow-throated Martens, as yet unseen alive in Winnipeg, are but slightly smaller than Fisher, also largely blackish brown, but the chin is white, and throat, lower neck and thorax are beautifully yellow — a fascinating, marvelous contrast. The specimens at the National Zoo in Washington, D.C., supposedly from Vietnam or Thailand, were smaller and by far less attractive than the huge male Yellow-throated Marten at Prague Zoo, probably an import from the Amur River region of northeast Asia.

Some books say that *Martes pennanti*, the Fisher, actually is an eager fisherman or, at least, fish eater; other authors deny this. At our Zoo, the male Fisher was given freshwater fish occasionally and ate them, but not very eagerly. We have discontinued the feeding of fish and therefore no contribution to make to solve the old argument.

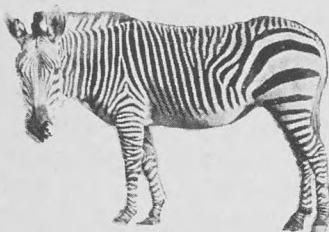


Our male Fisher

Hartmann's Mountain Zebra



GREVY ZEBRA



MOUNTAIN ZEBRA



GRANT'S ZEBRA



DAMARA ZEBRA

One of the most valuable donations ever given to the Zoological Society was the magnanimous gift by Mrs. Peter Curry early in November of a pair of the very rare Hartmann's Mountain Zebra, (*Equus zebra hartmannae*, Matschie, 1898). These two beautiful specimens came from Catskill, N.Y., and are already showing their abilities to withstand Canadian winters by growth of long hair. During the official handing over of the Zebras to the Metropolitan Corporation, Mrs. Peter Curry expressed her hope that this would be but a fore-runner to many donations to our Zoo by interested citizens.

The big game trapper Christoph Schulz, donor of Hyena "Windhoek", and his son Walter supplied the original stock of Hartmann's Mountain Zebras to the Catskill Game Farm, where this species of Zebra has done well ever since. Our stallion was born at Catskill on August 12, 1964 and the mare on September 24, 1962. Since she was in one paddock with the breeding stallion in Catskill, there is a possibility of her being expecting.

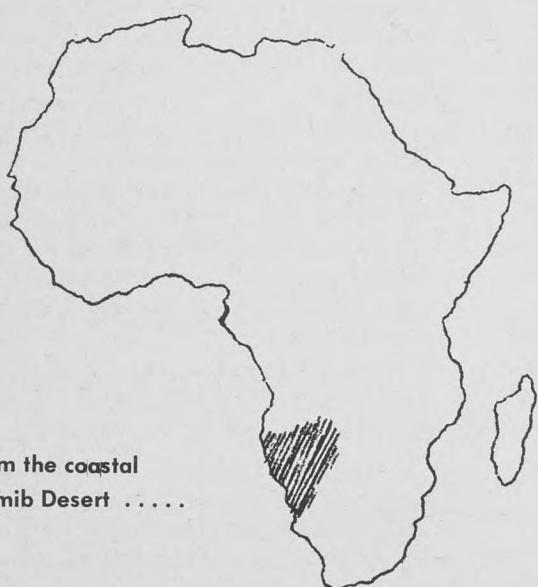
Hartmann's Mountain Zebra is larger than the common Mountain Zebra with broader white stripes, giving the animal a generally lighter appearance. An unbelievably nimble climber, and entirely unaffected by the most precipitous heights, the Hartmann's Mountain Zebra lives in an area from the coastal Namib Desert of southwestern Africa inland to the Kaukau Veld and in the mountains of southwestern Angola.

This species was named by Paul Matschie in 1898 after the wife of the Prussian Premierlieutenant Dr. Hartmann who donated the first two skins ever to reach Europe to the Royal Museum of Natural History in Berlin.



Our fine pair of Hartmann's Mountain Zebra, admired by George Heffelfinger, President, Mrs. Peter D. Curry, Donor, and Jack Willis, Metro Council Chairman.

The reasons and value of the Zebra's stripes have always fascinated observers; however, no conclusive evidence in any direction has been established. The most popular belief is that the stripes break the Zebra's outline producing a "Fata morgana" effect making the animal visible one moment and invisible the next. However, it is just a belief. Obviously lions are not subject to mirages as they depend heavily on Zebras for food. Ontogenetic and phylogenetic theories for the Zebra's stripes are also available.



**From the coastal
Namib Desert**

Letter to the Editor

Dear Mr. Schwanke:

Any undertaking to make people more conscious of our natural history and wildlife resources is a laudable objective.

Of particular benefit is the Zoolog quarterly of the Zoological Society of Manitoba which, in its very attractive format, presents valuable information in a highly readable and interesting fashion.

Permit me to offer my personal congratulations for the effective way in which you portray our natural history.

With all good wishes,
Yours sincerely,
Duff Roblin.

And that bird is called the crossbill;
Covered all with blood so clear,
On the groves of pines it singeth
Songs, like legends, strange to hear.

— Henry Wadsworth Longfellow

The Crossbills

"Adapt or perish" is a cardinal rule of survival for any species. Every living organism, be it drifting plankton or hovering hummingbird, has its own particular niche in which it is born, lives and reproduces, thereby ensuring the continuation of its kind.

But to occupy these niches successfully and to exploit the advantages of life there, species have had to adapt — to specialize. Not the least of these adaptions or specializations is the grotesquely twisted beaks of a group of birds known as crossbills.

Through the use of this seemingly awkward appendage these birds have been able to exploit a source of food which might otherwise have been unusable to them — that is the protein-rich seeds of coniferous trees. Locked as they are in the seed-bearing cones, these seeds are almost impossible for birds to extract without some form of specialization like the twisted beak of a crossbill.

Two kinds of crossbill are found in North America. Both are about the size of the familiar House Sparrow; both live in the coniferous forests of the northern and mountainous parts of the continent and both have counterparts which live in northern Europe and Asia. They are the Red Crossbill and the White-winged Crossbill.

The two species are similar in many respects but the white wing patches of the latter species eliminate any possibility of confusing the two. Males of both species are red: The White-winged, a rosy red; the Red, brick red. Females are greyish to greenish with the female Red Crossbill showing a prominent saffron yellow patch on the rump.

Few birds have as much mystery and superstition surrounding their lives

as do the crossbills. Their unique beak coupled with their unpredictable appearances, sometimes in astonishing numbers, has done little to penetrate this shroud of mystery.

They hold a special place in the legends of northern European peoples. One, immortalized in some of Longfellow's verses, attributes the crossed mandibles of these birds to their vain attempts to remove the nails from Christ's hands as he hung on the Cross.

But, as usual, truth is almost as strange as fiction.

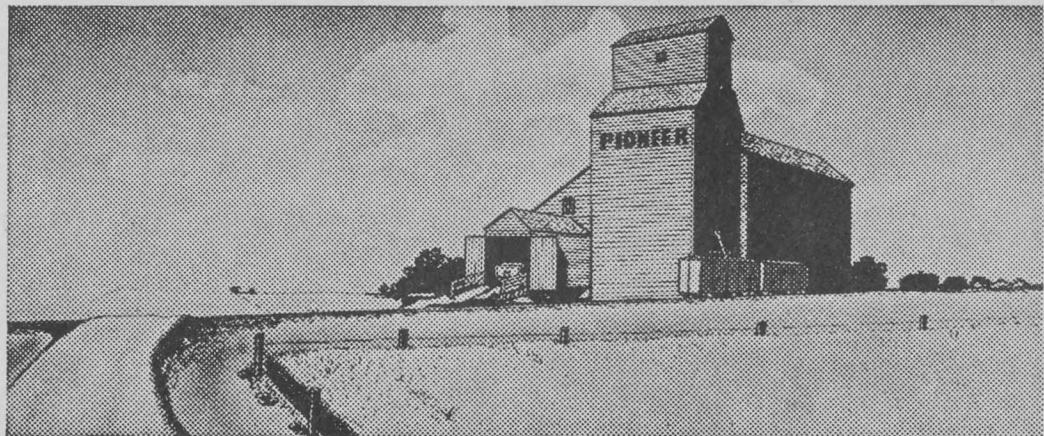
For example, crossbills have been found nesting in North America in every month of the year. This poses an obvious question. How do they feed their young in winter? Once again, adaption comes into play. Young crossbills can thrive on a vegetable diet in the form of regurgitated food supplied by their parents. This overcomes the lack of insect food, not available in winter, but considered a necessary part of the food requirements of nestlings.

The seeds of trees like white and black spruce and balsam fir are the principal sources of food for crossbills in Manitoba. But in summer they often exploit another food source — the insect eggs and larvae in galls found on the leaves of various kinds of deciduous trees.

Here again that unique beak comes into play, breaking open the hard outer covering to get to the food inside.

Crossbills are tame confiding birds and can be readily attracted to bird feeding stations — particularly if there is a liberal supply of sunflower seeds.

— Harold Hosford.



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Honour Roll

THESE MAJOR CONTRIBUTIONS OF THE LAST FIVE YEARS
ARE GRATEFULLY ACKNOWLEDGED

Manitoba Wildlife Branch

Animal Donations, Native Animals, 1961,
1963, 1964, 1965, 1966.

Mrs. F. W. Alcock, Charleswood

Animal Donation, Wallaby, 1961

Zoological Society of Manitoba

Moated Pens and Shelter, for Carnivores,
1963

Royal Trust Company

Animal Donation, Pandas, 1963

Carling Breweries Manitoba Ltd.

Animal Donation, Lions, 1964

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Animal Donation, Polar Bear, 1965

Zurich Zoo, Switzerland

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Mr. O. A. Olson, Nigeria

Animal Donation, Grey Parrot, 1966

Anonymous Donor

Accommodation, for Wolverines, 1966

Odeon-Morton Theatres

Animal Donation, Lion cub, 1966

Mrs. Peter Curry, Winnipeg

Animal Donation, Hartmann's Mountain
Zebras, 1966

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Animal and Cage Donation, Cougars, 1966

Eaton's of Canada

Animal Donation, Birds, 1966

Many of the above gifts were channelled through the Zoological Society of Manitoba. Donations are accepted by our Zoological Society and thus become tax-deductible.